



USAID
FROM THE AMERICAN PEOPLE

PHILIPPINES

GLOBAL CLIMATE CHANGE

SEPTEMBER 2003



USAID has a vast array of environmental programs in the Philippines addressing multiple areas of concern. Through measures such as renewable energy and natural resources management, USAID has succeeded in implementing and supporting activities that help mitigate the effects of climate change and prevent future environmental degradation.

Background. The Philippines hosts about 3,000 unique and endemic plant species and more than 500 of the world's 700 known coral species, but this uniqueness and diversity is under severe threat from population pressure, over-exploitation, and pollution. In addition, deforestation is a significant problem in the Philippines. In 1991 and 1992, land use changes accounted for almost 70% of carbon dioxide emissions. The rate of growth in net greenhouse gas (GHG) emissions will be a critical issue in the Philippines, and therefore managing the country's natural resources wisely to protect their supply and quality and to maintain their diversity is critical for sustained economic growth. Also vital to this effort is improving efficiency and productivity in the energy sector. Due to inefficient generation and supply of electricity, the Philippines has one of the highest energy consumption rates in Asia, and the demand is growing exponentially. Over half of the Philippines' GHG emissions are attributed to the energy sector, which continues to be hampered by limited security due to dependence on imported fossil fuels and underdevelopment of indigenous energy sources. Consequently, thousands of communities still lack electricity, particularly in areas affected by conflict and severe poverty. The transportation sector, which now produces as much atmospheric carbon as the power sector, is another significant source of GHG emissions.

Other factors that contribute to these environmental problems are increasing urban and industrial wastes. Such wastes pollute water, air, soil, and coastal resources, and have severe social and environmental impacts. These impacts are reflected in increasing health care costs, a growing natural resources export sector, and reduced workforce productivity. These sources of excessive atmospheric pollution not only contribute to global warming but also discourage foreign investment.

Sector-Specific Climate Change Activities. To address these environmental challenges, which directly threaten the ability of the Philippines to develop in a climate-friendly and climate impact-resilient manner, USAID is implementing a variety of environmental programs.

They include:

- Strengthening national and local government units and communities to address critical threats to resources
- Improving environmental policies
- Institution building through training and technical assistance
- Environmental advocacy through public awareness campaigns
- Improving the performance of the energy and transportation sectors

USAID's partners in climate change activities in Philippines include*:

- Academy for Educational Development (AED)
- Philippine Departments of Agriculture (DA), Energy (DOE), Environment and Natural Resources (DENR), and Transport and Communication (DOTC)
- Asian Development Bank (ADB)
- Asian Pacific Economic Cooperation (APEC) Energy Technical Working Group
- APEC Implementation Facilitation Assistance Team (IFAT)
- Association of Southeast Asian Nations (ASEAN)
- Climate Change Information Center (CCIC)
- Consumer Action for Reforms in the Electric Sector (CARES)
- Energy Regulatory Commission
- International Marine Alliance
- Japan Bank for International Cooperation (JBIC)
- League of Municipalities of the Philippines
- Mirant Corporation
- National Power Corporation (NPC)
- Teratech
- United States Energy Association (USEA)
- Winrock International
- World Bank
- World Wide Fund for Nature (WWF)

* Because partners change as new activities arise, this list of partners is not comprehensive.

Toward More Efficient, Cleaner, and Renewable Energy Production and Distribution. USAID supports the Philippine government's goal of supplying reliable, affordable, and cleaner energy to its citizens. The government passed the Electric Power Industry Reform Act (EPIRA) of 2000 to further improve implementation efficiency of the power industry. The law contains two vital components to improve performance – the restructuring of the electricity industry and the privatization of the National Power Corporation (NPC). Both reforms require continuing technical assistance to key implementing agencies, the Philippine Department of Energy (PDOE) and Energy Regulatory Commission (ERC), to enable them to establish an independent and strong regulatory mechanism. To lower electricity costs, USAID provides institutional strengthening of the PDOE and the ERC in order to formulate and implement guidelines that will promote true competition and prevent market abuse. Likewise, continuing support for the privatization of the NPC is necessary to improve its financial and operational efficiency. True competition, greater efficiency, and more transparency will result in lower electricity costs and better service that will give consumers power of choice. With USAID support, the passage of the EPIRA has opened the necessary avenues to achieve these goals.

USAID supports the Philippine government in formulating policies that encourage more investment in the energy sector while at the same time protecting consumers. USAID assistance is provided for regional and national energy planning activities for new fuel sources and construction of generation and transmission infrastructures. The information, education, and communication activities are crosscutting in all activities to increase public awareness and support for development of the energy sector. In addition, USAID focuses on private-public sector partnerships that will intensify its donor collaboration.

Addressing Climate Change Through Renewable Energy Sources. Meeting the ever-growing population's rising demand for energy continues to challenge Philippine policymakers for various reasons. The oil crisis of the 1970s showed how pervasive and critical the implications are of energy security to the economic life of nations. Energy use, after all, is a fact of life and ensuring a country's energy sufficiency requires long-term solutions from both the demand and supply perspectives. Reliance on conventional sources of energy in the past has also caused irreversible damage to the world's ecosystems. At both the international and local levels, mitigation of GHG emissions is gaining recognition as a helpful component of energy policy that is consistent with sustainable development principles.

Natural gas and other renewable energy sources also contribute to the avoidance of GHG emissions. Clean energy technologies are particularly important solutions to the GHG problem because of the opportunity they offer in addressing both the concern for environmental quality and their versatility for adoption in both off-grid and on-grid electrification.

The scientific community has made enormous strides in developing these technologies that tap renewable energy sources (e.g. solar, wind, hydro, geothermal, ocean, tides, fuel cells, biomass), and nations continue to actively seek practical ways of translating these solutions into economically viable options. In pursuing a serious renewable energy-based barangay (village) electrification program, the participation of other players, including local communities and organizations, the private sector, and the donor community, is equally significant given the potential amount of resources and expertise that they will be able to harness to complement government resources.

A successful example of the renewable energy electrification program can be seen in the conflict-affected and poverty-stricken areas of the Autonomous Region in Muslim Mindanao (ARMM) through USAID's partnership with the government and the private sector (Mirant Philippines) under the Alliance for Mindanao Off-Grid Renewable Energy Project (AMORE). In just one year, AMORE facilitated social preparations and strengthened community associations in more than 60 communities; installed electrical renewable energy systems in more than 35 former rebel soldier communities in Tawi-tawi and Basilan; and reduced participating households' monthly lighting costs by 70%. Renewable sources of energy, as demonstrated through the AMORE project, will be utilized to electrify more remote rural communities in ARMM areas. Activities will explore use of renewable energy for residential and agricultural water supply, telecommunications, and post-harvest activities. In addition to the energy benefits of this project, AMORE also promotes peace and economic growth in some of the poorest areas of the country.

The increased use of clean and indigenous fuels such as natural gas and renewable energy will provide a healthier energy supply mix that will reduce the country's dependence on imported fuel, which is estimated to cost \$700 million a year. USAID provides assistance in renewable energy resource assessments and development, as well as analysis of nationwide marketing of natural gas for power generation, transport, and industrial/commercial/residential use.

Addressing Air Pollution Through the Transportation Sector. In the transport sector, excessive air pollution – largely due to vehicle emissions – is estimated to have cost the Philippines \$450 million in 2001 in health care costs alone in six major cities. There are an increasing number of air pollution-related deaths, especially of children. Recent studies show that the Philippine transportation sector now produces as much atmospheric carbon as the power sector and contributes to severe air pollution and adds to GHG emissions. Metro Manila, with a population of 12 million people, has been categorized as one of the most polluted cities in the world, with particulate pollution levels three to four times above international standards. The government has recently responded with actions aimed at addressing the air pollution problems emanating from mobile

and stationary sources, such as a mandatory emission testing program prior to vehicle registration. USAID also initiated the Reduction of Vehicle Emission (ROVE) program. ROVE is designed to assist the government, particularly the departments of environment and natural resources, trade and industry, transportation and communication, energy, and health, in implementing the Clean Air Act of 2001, which has jurisdiction over the country's major urban areas.

Addressing Climate Change Through Natural Resources Management. Past and current USAID activities related to climate change and land use change include national/subnational policy initiatives in the land use/forestry sector that contribute to the preservation or increase of carbon stocks and sinks and to the avoidance of GHG emissions.

USAID supports policy initiatives that are aimed at facilitating improved land use planning, sustainable forest management, establishment and conservation of protected areas, and improved land and resource tenure.

Accomplishments include adoption and implementation of:

- National forest land use planning guidelines
- Presidential Executive Order (EO) 263 mandating community-based forest management as national policy
- Environment Department Administrative Order 96-2 defining implementing rules and regulations of EO 263
- The National Integrated Protected Areas System

With USAID support, at least 600,000 hectares of forest lands have been placed under improved management under the Philippines Department of Environment and Natural Resources community-based forest management program, thus contributing to the increase of carbon stocks and sinks for improved climate change.

Vulnerability and Adaptation. Overall, the geography and socioeconomic characteristics of the Philippine archipelago require that attention be placed both on climate change mitigation and adaptation. Through the years, USAID has taken concrete steps, such as coastal zone management programs, to reduce long-term vulnerability. Vulnerability of the coastal zone is largely brought about by activities such as blast fishing, cyanide use, coral harvesting, and mangrove deforestation. These activities result in habitat destruction and declining marine and fisheries resources. To improve coastal zone management, USAID is putting in place supportive environmental policies and strong enforcement activities, providing comprehensive advocacy and information sharing to all stakeholders, and ensuring sustainability of local actions by generating support and commitment from stakeholders.

For more information on Philippines, visit
USAID/Philippines' Mission Web site:

- <http://www.usaid-ph.gov/>